

Amendments to the Claims:

Please amend the claims as shown. Applicants reserve the right to pursue any cancelled claims at a later date.

Claims 1-7 (canceled)

8. (new) A cross-connector for optical signals comprising,  
N inputs,  
P outputs ( $N > 1$ ,  $P > 1$ ),  
the optical signals having time-division multiplexed channels,  
at least two optical switches, each configured to have optical signals fed in each instance to on of the optical switches.  
at least two optical combiners connected downstream of the optical switches,  
wherein the first optical switch is configured to branch a first number of channels to feed to the second optical combiner and  
wherein the second optical switch is configured to branch a second number of channels from the second optical signal to feed to the first optical combiner, and  
means for generating a plurality of optical control signals for controlling the at least two optical switches.

9. (new) The cross-connector according to Claim 8, wherein the the optical combiners comprise,  
a detection unit to determine the occupancy of incoming time-division multiplexed channels, and  
means for reciprocal time displacement or reassignment of channels.

10. (new) The cross-connector according to Claim 8, further comprising a plurality of delay elements arranged between the optical switches and the optical combiners, and being connected to a control facility and allowing time synchronization of the time-division multiplex signals.

11. (new) The cross-connector according to Claim 8, further comprising means for producing a sequence of pulses as control signals for controlling the addition or branching of channels in the non-demultiplexed time-division multiplex signal.

12. (new) The cross-connector according to Claim 8, further comprising a pulse source with means for producing output signals as control signals having pulse sequences, the maximum bit rate of which is the bit rate of the time-division multiplex signals.

13. (new) The cross-connector according to Claim 8, wherein the means for generating the control signals comprises,  
a splitter having means for splitting a pulse signal, having a basic data rate of the time-division multiplex signal, into a number of sub-pulses,  
a number of transit time elements,  
wherein the splitter is configured to feed one of the sub-pulses in each instance to a predetermined number of transit time elements, and  
wherein the transit time elements have transit times that differ by a whole number multiple of a bit duration,  
wherein the optical switches are arranged in series with each transmit time element, and  
wherein a combiner is connected downstream from the optical switches and configured to combine delayed sub-pulses to form control signals.

14. (new) A cross-connector arrangement as claimed in claim 13, wherein the optical switches comprise, Mach-Zehnder interferometers combined with photodiodes configured such that the addition, branching or time displacement of data of one of the time-division multiplexed channels of the time-division multiplex signal is carried out as a channel-related operation.

15. (new) A cross-connector according to Claim 13, wherein the control signals are optical pulses synchronized with the clock pulse of the data signals.

16. (new) A cross-connector according to Claim 13, wherein the splitter comprises means for splitting an optical pulse generated by a laser source with a repetition rate corresponding to the basic data rate.

17. (new) A cross-connector according to Claim 13, wherein the means for generating control signals comprises means for generating control signals such that the number of sub-pulses corresponds precisely to the number of channels of the time-division multiplex signal for flexibility in the number of channels to be switched.